Appendix I: SQL Cost Effectiveness Tool Documentation

For this report, a SQL based cost effectiveness tool was developed to improve the efficiency of the portfolio level analysis and cost effectiveness calculations. Cost effectiveness is calculated using the reported claim data and can be run on incremental or full application of evaluated parameters or "scenarios" using the SQL-based cost effectiveness tool (CET). The CET calculates cost effectiveness on the portfolio and programs using methodologies adopted in the California Standard Practice Manual – Economic Analysis of Demand-Side Programs and Projects.[1] Cost effectiveness is calculated using lifecycle cost-benefit ratios as described in the appendix titled "Cost Effectiveness Results". Common tests are the total resource cost (TRC) and program administrator cost (PAC) ratios. These ratios are based on the net present value of benefits, determined by avoided cost methodology[2], divided by net present value of costs. The CET employs the same equations that are in the E3 Calculator[3] and documented in the E3 Calculator TechMemo.[4] The E3 calculator is used to verify the results of the CET to ensure consistency with the commonly used tool for program administrators and other stakeholders.

What is the CET?

The CET consists of stored procedures (code), views (queries), and tables in a relational SQL Server database environment which enable cost effectiveness calculations to be run efficiently on the 6,220,353 reported claim records in the 2010-12 statewide portfolio. Cost effectiveness can be calculated at the measure, program, IOU portfolio, and statewide portfolio levels. Because benefits and costs are generated at the measure level, it is possible to derive cost effectiveness for any grouping of measures in the portfolio, for example any particular end use, target sector, or building type. The complete documentation of the CET can be found in the 2010-12 SQL CET Documentation[5] memo. A fully functional CET_1012_AnnualReport_Review database, including claim records and evaluation results can be downloaded from Appendix L on the EEStats website http://ees-tats.cpuc.ca.gov/Views/AnnualReport/AnnualReport.aspx?ContentId=15 . Note that in order to use this database SQL Server must be installed on the user's computer.[6]

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1   Available at http://www.cpuc.ca.gov/NR/rdon-lyres/004ABF9D-027C-4BE1-9AE1-CE56ADF8DADC/0/CPUC_STANDARD_PRACTICE_MANUAL.pdf

2   Available at: https://ethree.com/public_projects/cpuc5.php

3   Available at https://ethree.com/public_projects/cpuc4.php

4   Available at https://ethree.com/documents/E3_Calculator_TechMemo_6d.docx

5   Available at: http://eestats.cpuc.ca.gov/EEGA2010Files/GuidanceDocuments/SQL%20CET%20Review%20Documentation_v3.zip

6   A free version of SQL Server 2014 Express can be found here: http://www.microsoft.com/en-us/server-cloud/products/sql-server-editions/sql-server-express.aspx